

Title (en)  
SPEECH ENHANCEMENT METHOD AND APPARATUS, DEVICE AND STORAGE MEDIUM

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR SPRACHVERBESSERUNG, VORRICHTUNG UND SPEICHERMEDIUM

Title (fr)  
APPAREIL ET PROCÉDÉ D'AMÉLIORATION DE LA PAROLE, DISPOSITIF ET SUPPORT D'INFORMATIONS

Publication  
**EP 3696814 A1 20200819 (EN)**

Application  
**EP 19204922 A 20191023**

Priority  
CN 201910117712 A 20190215

Abstract (en)  
The present invention provides a speech enhancement method and apparatus, a device and a storage medium. The method includes: acquiring a first speech signal and a second speech signal; obtaining a signal to noise ratio of the first speech signal; determining, according to the signal to noise ratio of the first speech signal, a fusion coefficient of filtered signals corresponding to the first speech signal and the second speech signal; and performing, according to the fusion coefficient, speech fusion processing on the filtered signals corresponding to the first speech signal and the second speech signal to obtain an enhanced speech signal. Thereby, it is realized that a fusion coefficient of speech signals of a non-air conduction speech sensor and an air conduction speech sensor is adaptively adjusted according to environment noise, thereby improving the signal quality after speech fusion, and improving the effect of speech enhancement.

IPC 8 full level  
**G10L 21/0232** (2013.01); **G10L 21/0208** (2013.01)

CPC (source: EP US)  
**G10L 21/0208** (2013.01 - EP); **G10L 21/0232** (2013.01 - US); **G10L 21/0364** (2013.01 - US); **G10L 21/0232** (2013.01 - EP);  
**G10L 2021/02165** (2013.01 - EP)

Citation (search report)  
• [X1] CN 102347027 A 20120208 - AAC TECHNOLOGIES HOLDINGS INC, et al  
• [A] US 2018277135 A1 20180927 - ALI MAHDI [US], et al  
• [A] EP 2458586 A1 20120530 - KONINKL PHILIPS ELECTRONICS NV [NL]  
• [A] WO 2017190219 A1 20171109 - EERS GLOBAL TECH INC [CA]  
• [I] DEKENS TOMAS ET AL: "Body Conducted Speech Enhancement by Equalization and Signal Fusion", IEEE TRANSACTIONS ON AUDIO, SPEECH AND LANGUAGE PROCESSING, IEEE, US, vol. 21, no. 12, 1 December 2013 (2013-12-01), pages 2481 - 2492, XP011531021, ISSN: 1558-7916, [retrieved on 20131023], DOI: 10.1109/TASL.2013.2274696  
• [A] DUPONT S ET AL: "Combined use of close-talk and throat microphones for improved speech recognition under non-stationary background noise", ROBUST - COST278 AND ISCA TUTORIAL AND RESEARCH WORKSHOP ITRW ON ROBUSTNESS ISSUES IN CONVERSATIONAL INTERACTION, XX, XX, 30 August 2004 (2004-08-30), XP002311265

Cited by  
CN112163184A; CN112992167A

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3696814 A1 20200819**; CN 109767783 A 20190517; CN 109767783 B 20210202; US 11056130 B2 20210706; US 2020265857 A1 20200820

DOCDB simple family (application)  
**EP 19204922 A 20191023**; CN 201910117712 A 20190215; US 201916661935 A 20191023